Attorney Docket No. 1826.1063

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Rainer HAINBERGER

Application No.: Unassigned

Filed: April 4, 2005

Examiner: Unassigned

Group Art Unit: Unassigned

For:

RAMAN AMPLIFICATION SYSTEM UTILIZING MODULATED SECOND-ORDER

RAMAN PUMPING

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

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|---------|--|--|
| 1 | Enclosures accompanying this Information Disclosure Statement are: | |

1d. English language translation (complete, Abstract or relevant portion(s)) attached to non-English language publications as indicated on the attached Form PTO-1449.

1e. Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of non-English publications.

2. In accordance with 37 CFR § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is

(Check appropriate Items 2a, 2b, 2c and/or 2d)

satisfied for the non-English language publication(s) cited on the enclosed "English language version of the search report or action which indicates the degree of relevance found by the foreign office". (See MPEP § 609, Minimum Requirements for an Information Disclosure Statement, Part A(3): Concise Explanation of Relevance, 8th Ed., Rev. 2)04/01/20052b.

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| | 2b | \boxtimes | set forth in the application. | JC17 Rec'd PCT/PTO | U4 APR | Z |
|----|--------------|-------------|--|---|-----------|---|
| | 2c. 2d. | _ | satisfied for the non-English language attached PTO-1449 as having an Eng Abstract or relevant portion(s)) attache enclosed as Attachment 1(e), hereto. | lish language translation (c | | |
| 3. | to t (otl | be, ma | ssion is made that the information cited aterial to patentability nor a representat an search report(s) from a counterpart onal Search Report, if submitted herew | ion that a search has been foreign application or a PC | made T | |
| | | | Respectfully s | ubmitted, | | |
| | | | STAAS & HAI | SEY LLP | | |
| | | | | | | |

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JC17 Rec'd PCT/PTO 04 APR 2005

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.

10753004

1826.1063

FIRST NAMED INVENTOR

Rainer HAINBERGER

FILING DATE

GROUP ART UNIT

April 4, 2005

Unassigned

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

| *EXAMINER INITIAL | į | DOCUMENT NO. | DATE | NAME | CLASS | SUB- CLASS | FILING DATE |
|----------------------|----|-----------------|------|------|-------|---------------|----------------|
| | AA | | | | | | |
| | АВ | | | | | | |
| | AC | | | | | | |

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | TRANSLATION YES NO | ABSTRACT |
|--------|-----------------|------------|---------|-----------------------|----------|
| AD | 1022870 | 07/26/2000 | Europe | | |
| AE | 1148666 | 10/24/2001 | Europe | | |
| AF | 1298766 | 04/02/2003 | Europe | | |

OTHER REFERENCES (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

| | | | TRANSL | ATION |
|-----------|----|---|--------|-------|
| | | | YES | NO |
| | AG | L. Labrunie et al., "1.6 Terabit/s (160 X 10.66 Gbit/s) unrepeated transmission over 321 km using second order pumping distributed Raman amplification", OAA, 2001, pp. PD3-1~PD3-3. | | |
| | АН | Karsten Rottwitt et al., "Transparent 80 km Bi-Directionally Pumped Distributed Raman Amplifier with second order pumping" ECOC' 99,26-30, Nice, France, September 1999, pp. II-144~II-145. | | |
| | Al | Y. Hadjar et al., "Quantitative analysis of second order distributed Raman amplification", OFC 2002 Thb, March 21, 2002, pp. 381-382. | | |
| | AJ | S. B. Papernyi et al., "Third-Order Cascaded Raman Amplification", OFC 2002 Post deadline Papers, pp. FB-1~FB4-3. | | |
| | AK | C. R. S. Fludger et al., "Novel Ultra-broadband High Performance Distributed Raman Amplifier Employing Pump Modulation", OFC 2002 WB4, March 20, 2002, pp. 183-184. | | |
| | AL | C. R. S. Fludger et al., "Pump to Signal RIN transfer in Raman Fiber Amplifiers", Journal of Light wave Technology, Vol. 19, No. 8, August 2001, pp. 1140-1148. | | |
| EVANABLED | | DATE CONCIDEDED | | |

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

JC17 Rec'd PCT/PTO ATTACHMENT 1(e)

EXPLANATIONS OF RELEVANCY OF REFERENCES

References AD, AE and AF were cited in the enclosed International Search Report.

References AG, AH, AI, AJ, AK and AL were cited in the specification.